

DRILL HOLES

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BORDER REV. DATE: June 11, 2004

PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing Traffic Control Signal at the intersection of US 29 (Georgia Ave) and Bonifant Street in Montgomery County. Countdown Pedestrian signal heads with audible pushbuttons shall be installed at this location. The west leg of Bonifant Street is to be widened by Montgomery County forces. US 29 (Georgia Ave) is assumed to run in a north - south direction.

II. INTERSECTION OPERATION

- The intersection shall continue to operate in a NEMA four-phase, pre-timed mode, with the US 29 (Georgia Ave) approaches running concurrently. The pedestrian phases across both legs of US 29 (Georgia Ave) shall now be Countdown pedestrian phases with audible pushbutton actuation. The pedestrian phases on recall across Bonifant Street shall now be Countdown pedestrian phases with audible pushbuttons. The Bonifant Street approaches shall also continue to run concurrently.
- The existing full-traffic-actuated, eight-phase controller with L-A-U. and L-A-U. Panel housed in a NEMA size "6" base-mounted cabinet shall be utilized at this intersection.
- Montgomery County signal shop shall install APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to the Montgomery Signal Shop for testing and programming.

III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by Montgomery County Forces. Contact Kamal Hamud at (240) 777-8795 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
- Location of Accessible Pedestrian Signal Pushbuttons must meet location requirements of MUTCD Sec 4E.09 and Fig. 4E.2 and the NCHRP publication, "Accessible Pedestrian Signals: Guide to Best Practice". If not met, the Contractor is to stop work on pushbutton locations until a design waiver is obtained, approved by Montgomery County.

5. APS will function as follows:

FOR GEORGIA AVENUE

- When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will be "Wait to cross Georgia Avenue."
- When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

FOR BONIFANT STREET

- When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will be "Wait to cross Bonifant Street."
- When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	QUANTITY
8088	R10-11b "NO TURN ON RED" sign, (24"x24") pole mounted.	1 Each
8088	Special "No Thru (Symbolic) / Left ONLY / Right ONLY" (36" x 48") sign, pole mounted.	1 Each
	Special "No Thru (Symbolic) / combination Left / Right ONLY" (24" x 48") sign, pole mounted.	1 Each
	Pedestrian pushbutton and pedestrian education R10-3(1) mod sign. (Note: Sign to read "PUSH BUTTON TO CROSS GEORGIA AVE") (9" x 15").	4 Each
	Pedestrian pushbutton and pedestrian education R10-3(1) mod sign. (Note: Sign to read "PUSH BUTTON TO CROSS BONIFANT ST") (9" x 15").	4 Each
	R3-5(L&R) Mod "Left Only, Right Only" sign, (18" x 18") ground mounted.	1 Each

EQUIPMENT LIST (CONT.)

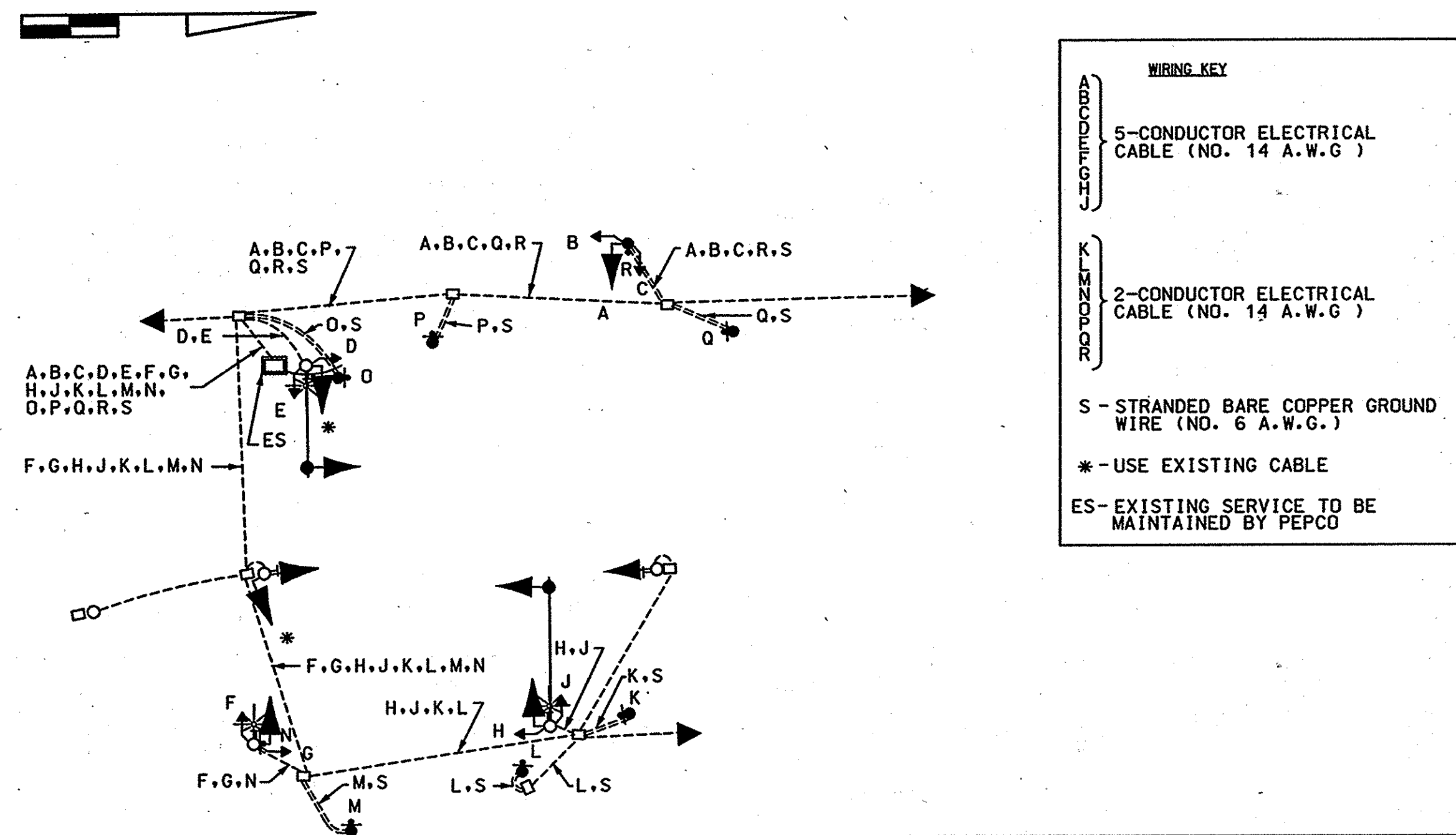
B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of Traffic	2 Day
2002	Test pit excavation.	10 C.Y.
5016	4" concrete sidewalk, mix No. 2.	50 S.F.
5018	Remove and restore ornamental brick sidewalk.	200 S.F.
5022	Remove sidewalk.	50 S.F.
8001	Concrete foundation.	5.5 C.Y.
8023	3" polyvinyl chloride electrical conduit (Schedule 80) (trenched).	85 L.F.
8064	2-conductor electrical cable (No. 14 A.W.G.).	1135 L.F.
8066	5-conductor electrical cable (No. 14 A.W.G.).	1210 L.F.
8075	1-conductor electrical cable (No. 6 A.W.G.) stranded bare copper ground wire.	165 L.F.
8148	Removal and salvage of signs less than 50 S.F.	7 Each
8162	Removal and salvage of any signal head.	17 Each
Neg.	Remove existing pavement markings.	880 L.F.
Neg.	Furnish and install white heat applied thermoplastic pavement marking arrows. (right)	2 Each
Neg.	Furnish and install white heat applied thermoplastic pavement marking arrows. (left)	2 Each
Neg.	5" white permanent thermoplastic pavement marking.	150 L.F.
Neg.	5" yellow permanent thermoplastic pavement marking.	300 L.F.
Neg.	10" yellow permanent thermoplastic pavement marking.	40 L.F.
Neg.	12" white heat applied permanent preformed thermoplastic pavement marking.	300 L.F.
Neg.	24" white heat applied permanent preformed thermoplastic pavement marking.	80 L.F.
Neg.	20' (brown) tall post	1 Each
Neg.	Furnish and install 12" vehicular LED traffic signal head (R,Y,G)	9 Each
Neg.	Furnish and install 16" LED Countdown pedestrian signal head.	8 Each
Neg.	5' breakaway pedestal pole with transformer base.	6 Each
	2 wire Central Control unit	1 Each
	Audible/tactile pedestrian pushbutton station & signs.	8 Each
	Remove existing tall post (including foundation).	1 Each
	13'-2" Decorative green pole with Washington Globe fixture.	3 Each
	Perpendicular sidewalk ramp (MD. Standard No. MD 655.11)	2 Each
	Parallel sidewalk ramp (MD. Standard No. MD 655.11)	2 Each
	Detectable Warning Surface (MD. Standard No. MD 655.11)	160 S.F.
	Remove monolithic median / island.	175 S.F.
	Install median nose down.	15 S.F.
	36" flex post.	4 Each

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)	(R) (Y) (G)
PHASE 2 & 6	G	G	G	G	R	R	R	R	R	WK	WK	WK	WK	DW	DW	DW	DW
PED CLEAR / COUNTDOWN	G	G	G	G	R	R	R	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	R	R	R	R	R	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	DW	DW	DW	DW
4 & 8 CHANGE	R	R	R	R	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
PHASE 4 & 8 ALT	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	WK	WK	WK	WK
PED CLEAR / COUNTDOWN	R	R	R	R	G	G	G	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW
4 & 8 ALT CHANGE	R	R	R	R	Y	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK

WIRING DIAGRAM

**SHA**STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATIONUS 29 (GEORGIA AVE) AND
BONIFANT ST

GENERAL INFORMATION SHEET

SCALE NONE DATE 4/23/07 CONTRACT NO.

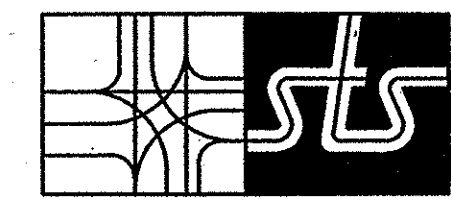
DESIGNED BY R.R.Z COUNTY MONTGOMERY

DRAWN BY R.C. LOGMILE

CHECKED BY TIMS NO. 485

F.A.P. NO. TOD NO.

TS NO. 4572-61 DRAWING NO. 3 OF 4 SHEET NO. OF



STREET TRAFFIC STUDIES, LTD.

400 Crain Hwy., NW
Glen Burnie, MD 21061Ph (410) 590-5500
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